

In re: Gerald H. Negley et al.  
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#### REMARKS

Applicants appreciate the Examiner's explanation in the Advisory Action of September 6, 2005. Applicants now understand the Examiner's reasoning with respect to independent Claims 1 and 9. In particular, as indicated in the Advisory Action, the Examiner apparently considers the dome-shaped shell of Claims 1 and 9 to read on the solid shell 14 of Taskar in combination with the gel or liquid of Taskar that is adjacent the solid shell. Now that Applicants understand the Examiner's reasoning, Applicants hereby amend independent Claims 1 and 9 to recite a solid transparent dome-shaped element that is directly on another solid dome-shaped element that includes a phosphor dispersed therein. Moreover, the keypad-related claims continue to be patentable in their present form. Accordingly, Applicants respectfully submit that all the claims are patentable, for the reasons that now will be described.

#### Claims, 1, 6, 9-10 and 16-18 Are Patentable Over U.S. Patent 6,734,465 to Taskar et al.

Claims 1, 6, 9-10 and 16-18 stand rejected under 35 USC §102(e) as being anticipated by Taskar et al. Paragraph 4 of the final Official Action identifies the dome-shaped transmissive optical element having phosphor dispersed therein (Claim 1) and the first dome-shaped shell that comprises a transparent plastic including a phosphor dispersed therein (Claim 9) as corresponding to element 13 of Taskar et al. Paragraph 4 of the final Official Action also identifies the transparent dome-shaped shell (Claim 1) and the second dome-shaped shell (Claim 9) as corresponding to element 14 of Taskar et al. Assume, for the sake of argument, that this is true. However, the elements 13 and 14 of Taskar et al. do not meet the claim recitations. In particular, there are three possible relationships between the elements 13 and 14 of Taskar et al. First, they may be spaced apart from one another with nothing (or air) therebetween. Alternatively, as noted in Taskar et al. Column 9, lines 25-32, cited in the Advisory Action, a composite gel or liquid can be injected to fill the volume therebetween. If there is nothing or air therebetween, then elements 13 and 14 of Taskar et al. are not directly on one another, whereas independent Claims 1 and 9 both recite that the elements are directly on one another. Alternatively, if there is a gel or liquid encapsulant between elements 13 and 14 of Taskar et al., they are also not directly on one another, as recited in Claims 1 and 9. Finally, if the solid or liquid encapsulant is somehow considered to be a part of elements 13 or 14 of Taskar et al., then these elements would no longer be solid, and Claims 1 and 9 have been

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amended to clearly recite that both of the elements are solid elements. For at least these reasons, Claims 1 and 9 are patentable over Taskar et al.

Dependent Claim 6 is patentable at least per the patentability of Claim 1 from which it depends. Moreover, this claim is separately patentable because this claim recites that the transparent dome-shaped shell is formed first, and then a dome-shaped mold that includes the transparent dome-shaped shell is filled with a molten liquid that comprises a transparent plastic and phosphor additive. The Official Action states that Taskar et al. Figures 2-4 satisfy these recitations. However, looking at Taskar et al. Figures 2-4, the molded epoxy lens 14 appears to completely surround the entire LED device. So, how could this molded epoxy lens be formed before the nanophosphor downconverter 13 that is contained entirely within the molded epoxy lens 14? It simply could not. Accordingly, Claim 6 is independently patentable.

Dependent Claims 16-18 are patentable at least per the patentability of the independent claims from which they depend.

**Claims 9-10 and 16-18 Are Patentable Over U.S. Patent 6,521,915 to Odaki et al.**

Claims 9-10 and 16-18 stand rejected under 35 USC §102(e) as being anticipated by Odaki et al. The final Official Action states that element 20 of Odaki et al. corresponds to the claimed second dome-shaped shell. However, element 20 of Odaki et al. is a "sealed member", which, as clearly shown in Odaki et al. Figures 3 and 5, is a solid, thick member, and is not a dome-shaped shell. In order to further highlight the patentable distinctions, Claim 9 has been amended to clearly recite that the first solid dome-shaped shell includes a dome-shaped inner surface and a dome-shaped outer surface, and that the second solid dome-shaped shell also includes a dome-shaped inner surface and a dome-shaped outer surface. Similar amendments have been made to Claim 1 for consistency. Applicants respectfully submit that the sealed member 20 of Odaki et al., as illustrated in Odaki et al.'s figures, clearly does not include a dome-shaped inner surface and a dome-shaped outer surface. Accordingly, Claim 9 is patentable over Odaki et al. for at least these reasons. Dependent Claims 10 and 16-18 are patentable at least per the patentability of Claim 9 from which they depend.

**Claims 9 and 27 Are Patentable Over U.S. Patent 6,576,930 to Reeh et al.**

Claims 9 and 27 stand rejected under 35 USC §102(e) as being anticipated by Reeh et al. The Official Action contends at Paragraph 6 that the second dome-shaped shell of Claim 9

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corresponds to the transparent encapsulation 15 of Figure 4 of Reeh et al. However, this transparent encapsulation 15 does not include a dome-shaped inner surface and a dome-shaped outer surface, as recited in Claim 9. Moreover, even if the Examiner interprets the transparent encapsulation 10 of Figure 4 of Reeh et al. as being a dome-shaped shell, this transparent encapsulation 10 is not directly on the inner or outer surface of the luminescence conversion layer 4, but, rather, is widely spaced apart therefrom. Accordingly, Claim 9 is patentable over Reeh et al. for at least these reasons.

Dependent Claim 27 is patentable at least per the patentability of independent Claim 9 from which it depends. Moreover, Reeh et al. does not appear to describe or suggest three dome-shaped shells directly on one another, as recited in Claim 27. More specifically, if the transparent encapsulation 10 is regarded as a dome-shaped shell, as illustrated in Reeh et al. Figure 4, then it is not directly on the luminescence conversion layer 4. Moreover, if the transparent encapsulation 10 is a solid, thick encapsulation, then it is not a dome-shaped shell. In either case, the claim recitations with respect to the third dome-shaped shell are not described or suggested. Accordingly, Claim 27 is independently patentable for at least these reasons.

**Claims 19-21 Are Patentable Over U.S. Patent 6,346,973 to Shibamoto et al.**

Claims 19-21 stand rejected under 35 USC §102(b) as being anticipated by Shibamoto et al. The final Official Action cites to Figures 1-5 of Shibamoto et al. However, in these figures, the electroluminescent layer 6 is offset from the keys 35 by an intermediate substrate 4 and an Indium Tin Oxide (ITO) layer 5. Accordingly, the recitation of Claim 19 that "the keypad key shell comprising a transparent plastic including a phosphor dispersed therein" is simply not met by electroluminescent layer 6, which is well beneath the keypad key shell 31, 35. For at least these reasons, Claim 19 is patentable over Shibamoto et al.

Dependent Claims 20 and 21 are patentable at least for the reasons that were described above in connection with Claim 19. Moreover, these claims are independently patentable because the electroluminescent layer 6, which is well beneath the keypad key of Shibamoto et al., does not describe or suggest the recitation of Claim 20 that the phosphor is uniformly dispersed in the keypad key shell, or of Claim 21 that the phosphor is uniformly dispersed in the keypad key face, and is not included in the keypad key wall. Accordingly, these claims are independently patentable for at least these reasons.

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**Claims 19-21 Are Patentable Over U.S. Patent 5,669,486 to Shima**

Claims 19-21 also stand rejected under 35 USC §102(b) as being anticipated by Shima. The final Official Action cites Shima Figures 1-2 and 4. However, in these figures, the electroluminescent layer corresponds to element 3 or 3a, which, as shown in these figures, are well below the display key 7. The electroluminescent layer is certainly not in the display key 7 or the domed shaped spring 1 of Shima, but is, rather, far beneath them. Accordingly, Shima does not describe or suggest that the keypad key shell comprises a transparent plastic including a phosphor dispersed therein, as recited in Claim 19. Moreover, dependent Claims 20 and 21 are independently patentable, because Shima's electroluminescent layer 3/3a is certainly not uniformly dispersed in Shima's keypad key shell 7/1, as recited in Claim 20, nor is the electroluminescent layer uniformly dispersed in the keypad key face, and not included in the keypad key wall, as recited in Claim 21.

**Claims 7 and 8 Are Patentable Over U.S. Patent Application Publication 2002/0172354 to Nishi**

Claims 7 and 8 stand rejected under 35 USC §102(e) as being unpatentable over Nishi. This rejection appears to actually be under 35 USC §103 in view of the quotation of 35 USC §103 at Paragraph 8 of the final Official Action and the Examiner's remarks in Paragraph 9.

In any event, the final Official Action concedes at the middle of Page 9 that, "Nishi is silent about a molten liquid comprising a phosphor additive." The Official Action contends that it would be obvious that the phosphor can be added within the shell. However, in all the references related to keypad keys that were cited in the Official Action, such as U.S. Patent 5,669,486 to Shima and U.S. Patent 6,346,973 to Shibamoto et al., the phosphor is clearly well below the keypad key. Accordingly, if either of these references were combined with Nishi, the phosphor would be provided well below the keypad key. The combination of references, therefore, would not describe or suggest placing the phosphor within the shell of the key itself, as recited in Claim 7. Similarly, there is no description or suggestion to place the phosphor within the keypad key face and then form a keypad key wall that is attached at a keypad key face, as recited in Claim 8.

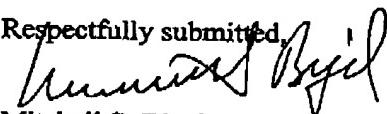
Finally, dependent Claims 11 and 22 are patentable at least as depending from a patentable independent claim.

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**Conclusion**

Applicants again thank the Examiner for the continued thorough examination, and the detailed claim-by-claim analysis and the references that were cited. Independent Claims 1 and 9 have now been amended extensively to further clarify the patentable distinctions over the cited art. Moreover, as was shown above, many of the dependent claims also are separately patentable. Finally, Applicants respectfully request the Examiner to reconsider the keypad key Claims 7, 8 and 19-22, which also clearly appear to patentably define over the cited art. Accordingly, Applicants respectfully request entry of this Amendment and the RCE that accompanies this Amendment, withdrawal of the outstanding rejections and allowance of the present application.

Respectfully submitted,

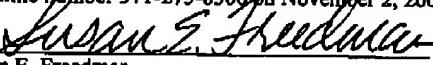


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